

**To:** Powell, Greg[Powell.Greg@epa.gov]  
**From:** Greenberg, Marc  
**Sent:** Tue 8/18/2015 3:46:37 PM  
**Subject:** Re: Management Report for the Gold King Mine Release - 8/11 to 8/12 Operational Period

Weird I called you Dan. Hi Greg!  
You still out there in Durango?

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Marc S. Greenberg, Ph.D.  
Deputy Branch Chief  
U.S. EPA  
Environmental Response Team  
609-865-3924 cell

Message sent via EPA wireless device

On Aug 18, 2015, at 9:20 AM, Powell, Greg <Powell.Greg@epa.gov> wrote:

I think they are spinning again.

**From:** Greenberg, Marc  
**Sent:** Monday, August 17, 2015 4:40 PM  
**To:** Powell, Greg  
**Subject:** RE: Management Report for the Gold King Mine Release - 8/11 to 8/12 Operational Period

Thanks Dan. I'm glad you are also sensitive to this as an issue. I did alert Jim to this last week before I left and then I had a good conversation with OEM. We've worked out a solution so that ERT can be included on the reporting. After talking with Josh, I don't think there was any malice or intentional oversight of ERT's activities. It's a "feed in" system they have for generating the daily reports. Please see the following attached email.

**From:** Powell, Greg  
**Sent:** Thursday, August 13, 2015 3:49 PM  
**To:** Greenberg, Marc  
**Subject:** FW: Management Report for the Gold King Mine Release - 8/11 to 8/12 Operational Period

Marc:

If there is any doubt about OEM's feelings and intentions toward ERT this report sums it up. No mention of ERT who is responding. They were notified and chose to ignore. Woolford should use this as an example of continuing issues.

**From:** Eoc, Epahq

**Sent:** Thursday, August 13, 2015 3:38 PM

**Subject:** Management Report for the Gold King Mine Release - 8/11 to 8/12 Operational Period

**This report is being sent as a bcc to prevent accidental Reply to All messages.**

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<image001.png>

For Internal Use Only

Gold King Mine Release

EPA Internal Update: August 13, 2015 1530 ET

## **Situation Summary**

Overview: On August 5, 2015, EPA was conducting an investigation of the Gold King Mine near Silverton, Colorado, to assess the on-going water releases from the mine, treat mine water, and assess the feasibility of further mine remediation. While excavating loose material that had collapsed into the cave entry, pressurized water began leaking above the mine tunnel, spilling an estimated three million gallons of water stored behind the collapsed material into Cement Creek, a tributary of the Animas River. The release's path currently flows through three of EPA's regions: Region 8—Colorado, Utah and the Southern Ute

Tribe; Region 6--New Mexico; and, Region 9--Navajo Nation. The flow from the Gold King Mine is currently estimated at 215 gallons per minute. The mine water is being treated in a series of four settling ponds constructed near the portal. The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aerial reconnaissance combined with observations on the ground indicate that the plume associated with the Gold King Mine release has dissipated downstream. There is no leading edge of contamination visible in downstream sections of the San Juan River or in Lake Powell.

Public Website: A public-facing website has been set up for the response: <http://www2.epa.gov/goldkingmine>. The EPA Administrator, Gina McCarthy, arrived in Durango, CO on August 12 to tour the Animas River and meet with members of Unified EPA Area Command.

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Response Organization: EPA is integrated in Unified Command in Durango, CO and in four Incident Command Posts (ICPs) in Silverton and Durango, CO, Farmington, NM, and Lake Powell (at the Arizona and Utah Border). Unified EPA Area Command is in the process of standing up operations out of Durango, CO with representatives from EPA Regions 6, 8 and 9. Anticipated activities include:

- Coordinating activities from the various Incident Command Posts in the Regions.
- Consolidating situation reports from the ICPs into a single Unified Command situation report.
- Routing resource and funding requests from the ICPs to HQ
- Reviewing sampling data and developing public messaging.
- Determining staffing needs for EPA hotlines

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The Headquarters Emergency Operations Center (HQ EOC) activated to Level 1 Operations on Tuesday, August 11.

#### **Data Management Team**

The HQ Environmental Unit (EU) performed cursory reviews of Region 8 water samples taken August 5 - 9 and Region 6 water samples taken August 7 – 8 previously validated by regional data teams. The EU also has a list of labs via OEM's Environmental Response Laboratory Network (ERLN).

*Regional Risk-based Screening Levels.* ORD staff reviewed the draft Risk-based Screening Levels that were developed by Regional risk assessors. ORD reviewers concluded that the proposed screening levels were reasonable and conservative (protective). It was also suggested that the levels might want to address the issue of dermal exposure although it is expected that based on risk assessments at other Superfund sites, dermal exposure from metals would not be a driver for human health risks.\_

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*Modeling of Contaminant Fate and Transport.* ORD (NERL Athens) has offered to conduct a modeling study of the Animas River that would predict the fate, transport, and exposure to key contaminants released from the Gold King Mine site. The proposed study would utilize a model to predict contaminant concentrations in water and sediments and to estimate contaminant concentrations in game fish.

*Additional Lab Capacity.* ORD is looking into the additional options for obtaining extra laboratory analytical capacity should the need arise. ORD is determining what level of onsite and contractor sample analysis capacity we have in the event that the Regions exceed their current capability. All the Regions with lab capabilities have already been put on notice in case backup is needed.

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*Field Analyses.* The Region 6 DRA, has communicated to ORD about the needs that the region has for analyzing soil, sediment, and water samples in the field. ORD has provided the DRA with a one-pager that simply identifies the current state of the technology with links to more information about the various technologies provided. Staff in Duluth and Cincinnati have provided input.

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*Imagery.* ORD staff are ready to access their colleagues at USGS and NASA to gather additional aerial imagery. The ASPECT plane has been providing information but we have access to other sources should the need arise.

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*Review of Analytical Data.* ORD staff is assisting the Environment Unit in reviewing data from the site.

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## **Claims**

A claims process exists for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process is available in EPA's regulations at 40 CFR Part 10, and includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other claims.

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## **Area Command (AC)**

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AC is in the process of activating for this response and will consolidate situation reports, coordinating data messaging, establishing screening levels, managing the 844 claims phone number for private well sampling, coordinate finance and resource requests for the Regional ICPs to HQ.

## **Region 8 ICP (Durango and Silverton, CO)**

*Water Sampling:* The EPA initiated a water quality sampling effort on August 5, to assess the impacts of the release at the Gold King Mine. There were 30-40 private well water samples collected on August 10. The analysis of these samples include pH, dissolved concentrations of metals, and operational milestones.

<b><u>System Name</u></b>	<b><u>Population</u></b>	<b><u># Days Water Available</u></b>
Durango, CO	23,000	Indefinite, using another source
Glacier Club, CO	525	Indefinite, using stored water and another source
No impacted systems in		

Utah, all have groundwater sources		
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Region 8 has been coordinating private well sampling, with both EPA and State teams (including contractors) collecting well samples in Colorado. EPA is paying for the analyses. EPA has been sampling all wells that have been requested, but is now creating a prioritization process since the demand is so high. Region 8 staff have created a list of private wells in the alluvial zone near the river, and is now sorting that list by distance to the river.

All municipal drinking water systems along the Animas River in Colorado, New Mexico, and Utah either are using alternate water sources or have enough clean source water stored that they have not had to shut down.

*Surface Water & Sediment Sampling:* Baseline surface water quality data from the past 17 years has been obtained, and will be compared with the new water quality data. Surface water quality samples were collected from 7 locations near Silverton, CO; two of these locations were on Cement Creek, and five of these were on the Animas River in Colorado. Region 8 continues to operate four treatment and sedimentation ponds at the mine site and are treating water by lowering acidity levels and removing dissolved metals. Treated water from the last treatment pond is discharging into Cement Creek are measured at levels below (higher pH and lower levels of metals) than the pre-event, background conditions in the creek.

*Agriculture/Livestock:* EPA Region 8 is distributing bottled water to citizens, and both potable and non-potable water for livestock and other agricultural purposes, as needed.

### **Region 6 ICP (New Mexico Command, Farmington, NM)**

\* *Region 6 RA Visit:* The Region 6 Administrator and OSCs participated in the 8/11 community meeting in Farmington, NM.

\* *General Call-in Phone Number:* Region 6 created a new general, public call-in number for Regions 6, 8, and 9: (844) 382-9670.

*Water Sampling:* Private well water sampling is ongoing (analytical results are pending) and field pH levels and other water quality parameters are being monitored. Six private drinking water well teams collected samples at 30 locations. Based on conversations with the State of New Mexico and drinking water systems on August 11, the following is the list of affected water systems and their status:

<b><u>System Name</u></b>	<b><u>Population</u></b>	<b><u># Days Water Available</u></b>
Aztec Domestic Water System	6800	10
Farmington Water System	47,000	60
Lower Valley WUA	8,428	8
Morningstar Water Supply System	6,423	7-14
Northstar WDWCA	4,123	45
Southside Mutual Domestic	1,593	5, but depends on Aztec
Upper La Plata WUA	2,265	Depends on Aztec and Farmington
Flora Vista	4,300	1, but depends on Aztec
<b>Total Population</b>	<b>80,932</b>	-

*Surface Water & Sediment Sampling:* Nine (9) surface water and sediment samples were collected. Three (3) of the nine sediment samples had visible discolored sediment material. One (1) of these samples was from Farmington, NM and two were from Aztec, NM. Preliminary lab data from August 8 have been received and are being validated and interpreted.

*Agriculture/Livestock:* San Juan County has requested water hauler trucks to start making deliveries. Each water hauler is estimated to be able to carry 5,000 gallons. One truck is needed per acre, which provides about a quarter inch of water. Four water deliveries for agriculture or livestock needs were made on August 11. The limiting factor is the number of available trucks. Region 6 estimates that there will be 13 trucks available by the end of the week. San Juan County is coordinating loading points and logistics for staging and scheduling the trucks.

EPA assisted NMED by providing support at the residential water testing station located at the San Juan County Fairgrounds.

### **Region 9 ICP (Navajo Command, Farmington, NM)**

*Water Sampling:* Potentially impacted public water systems have been notified and precautions are in place to ensure drinking water in homes is protected. Monitoring is being conducted by several agencies including US Geological Survey (USGS), Utah Division of Water Quality (UDWQ), and the USGS Utah Water Science Center. The UDWQ has a crew at the state-line with a pH meter waiting for the plume and estimates that the plume will arrive between 3:00pm and midnight tonight. They plan to collect samples through Friday (8/14). The Bureau of Reclamation is not yet performing sampling, but has increased water releases from the Navajo Reservoir in attempt to maintain a target base flow through the endangered fish critical habitat. They are planning to sample Lake Powell with USGS in the near future. The AZDEQ is planning to take samples tomorrow from two locations: Glen Canyon Dam intake and the Lee's Ferry Boat ramp (water plant intake).

### **EPA Headquarters**

The HQ EOC has been activated at Level 1 for this incident. HQ EOC tasks include:

- coordination of Regional staffing and funding needs;
- participation in data calls to interpret water and sediment data;
- exploration of various authorities and funding sources that might be available to the Agency in responding to this incident;
- determination of which public drinking water systems use the Animas River as a water source, if these systems have alternate sources for intake water, and how many days' supply they have; and
- development of messages for the public-facing website on the suitability of the water for various uses (drinking, recreation, agricultural, livestock).

In addition, the following HQ activities also occurred:

- [REDACTED] The EPA Administrator, Gina McCarthy, arrived in Durango, CO on August



12 to tour the Animas River and meet with members of Unified EPA Area Command.

- After multiple flyovers, ASPECT reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream, and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell. ASPECT did not fly on August 11, 2015, due to weather conditions. They plan on flying on August, 12.
- EPA held an incident briefing with the National Response Team and provided brief outs to regional offices from participating agencies.

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HQ EOC PIO: EPA issued two press releases regarding the Gold King Mine Release incident, on 8/8 and 8/11, respectively. EPA will be posting Administrator McCarthy's statement about EPA ceasing field investigation work at mine site and tailings facilities. The PIO is working to find subject-matter experts (SMEs) to serve as JIC reachback personnel. The PIO also worked with the UC PIO to develop public messaging designed to explain data results and provide possible protective actions.

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HQ EOC Finance: EPA is still collecting financial information for this incident

#### NUMBER OF PERSONNEL INVOLVED:

Region/State	Current		Current		Total
	EPA Personnel In Field  (All venues other than EPA Offices)	EPA Contractor Personnel in the Field	EPA Personnel in REOC / HQEOC	Contractor Personnel in REOC / HQEOC	
Region 8	24	17	11	2	<b>54</b>
Region 6	21	32	14	4	<b>71</b>
Region 9	2	7	2	0	<b>11</b>
HQ EOC	0	0	17	2	<b>19</b>
<b>Total</b>	<b>47</b>	<b>56</b>	<b>44</b>	<b>8</b>	<b>155</b>

**\*HQ EOC numbers reflect personnel supporting the response during the current operational period. Regional numbers reflect personnel responding to the incident on August 11<sup>th</sup>.**

Peter Oh, Senior Watch Officer

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